

REMARKS

I. STATUS OF CLAIMS

Claims 1-29 are pending in this application. Claims 1 and 29 have been amended to recite "at least one optical fibre element comprising at least one tubular element containing at least one optical fibre." This amendment is supported by the specification, for example, at Figure 3 (either components 32, 36, or 37 maybe the recited tubular element), and Figure 4 (component 36 maybe the recited tubular element). Applicants amended claims 19 and 20 in view of the amendment to claim 1. Claim 28 was amended to correct a typographical error. Applicants submit that this amendment introduces no new matter.

Applicants understand that the Examiner withdrew the prior Office Action and that the present Office Action re-started the period for reply.

II. INFORMATION DISCLOSURE STATEMENTS

Applicants respectfully thank the Examiner for indicating in the May 2, 2003 Office Action, which was later withdrawn, that three Information Disclosure Statements had been considered. Applicants respectfully request that the Examiner consider the references that were attached thereto, initial the PTO-1449 forms that were provided with all three Information Disclosure Statements, and provide Applicants with a copy of the initialed PTO-1449 forms.

III. CLAIM OF FOREIGN PRIORITY

Applicants respectfully request that the Examiner acknowledge in the next paper Applicants' claim of priority to Italian patent application M198A001658, filed

July 20, 1998 and whether certified copies had been received from the International Bureau.

IV. SECTION 102 REJECTIONS

The Examiner rejected claims 1, 4, 6, 10, 11 and 14 under 35 U.S.C. § 102(b) as anticipated by DE 32 24 597 ("Siemens") and rejected claims 1, 6, and 8 under 35 U.S.C. § 102(b) as anticipated by FR 25 63 042 ("Electricite de France") for reasons not present at page 3 of the Office Action. Applicants object to both of these rejections as being improper for the failure to provide any reasoned analysis, as required by M.P.E.P. §§ 707 and 707.07(d). Nevertheless, Applicants traverse this rejection for at least the following reasons.

Amended claim 1 recites a hybrid electrical-optical cable for overhead installations including, *inter alia*, three insulated phase conductors helically wound around a supporting rope, wherein the supporting rope includes, *inter alia*, (1) at least one optical fibre element comprising at least one tubular element containing at least one optical fibre and (2) a tubular structure being made from a material to resist transverse compression.

Applicants respectfully traverse the rejection of claim 1, and all claims that depend from it, as anticipated by Siemens and Electricite de France. In order to properly anticipate Applicants' claimed invention under 35 U.S.C. § 102(b), each and every element of the claim in issue must be found, either expressly described or under principles of inherency, in a single prior art reference. See M.P.E.P. § 2131.

Moreover, should the Examiner be relying on inherency of the undisclosed elements,

Applicants submit that the Examiner failed to provide the requisite "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ 1461, 1464 (Bd. Pat. App. & Int. 1990).

Siemens discloses a power line with optical conductors integrated into a bearing member that resists tensile stress and protects the optical conductors from tensile stresses (p. 4, lines 5-13). Braided elements 8, 10 of flexible steel wire, high strength plastic threads, or mixed steel-cooper flexible wires form the bearing members (p. 4, lines 24-29). Siemens further discloses three embodiments of optical conductors in Figures 1-3 and four embodiments of power lines shown in Figures 4-7, wherein the braided elements 8, 10 resist tensile stress.

Siemens, however, fails to disclose all of the elements of claim 1. First, Siemens fails to teach that the three phase conductors are **helically** wound around the supporting rope including the optical fibers as recited in claim 1. Nothing in Figures 1-7 or the descriptions thereof suggest a helical winding. In fact, when a helical winding is intended to be suggested, it is expressly stated, such as with braided elements 8 and 10.

Second, Siemens fails to teach a supporting rope including a tubular structure being resistant to transverse compression as recited in claim 1 of the present application. As explained in the specification, the tubular structure is positioned inside of the supporting structure, which is resistant to longitudinal tension, so as to protect the optical fibre element from, inter alia, forces created by the supporting

structure. Specification at page 5, lines 17-34. While Siemens teaches a tubular element in Figures 1-3, Applicants submit there is no disclosure of a tubular structure inside of a supporting structure (elements 8 and 10 of Figures 1-3).

Moreover, Applicants assert that Siemens teaches against having a supporting rope including a tubular structure resistant to transverse compression, as Siemens is directed to flexible power lines for supplying power and/or for controlling portable consumers. (p1, lines 3-4; page 2, lines 6-15). To include a supporting rope including a tubular structure resistant to transverse compression would make the power lines of Siemens less flexible and more rigid, thus impermissibly rendering the prior art unsatisfactory for its intended purpose.

Electricite de France discloses medium voltage electric power transmission cables primarily for buried networks including phase conductors 10 (p.1, lines 1-6 of translation). The reference discloses optical fibers surrounded by a tube of insulating thermoplastic material 14, a layer of wires 16, and a lead sheath 18 (p. 2, lines 8-12). Figures 3-5 disclose three embodiments of the optical module 15 of Figure 2, which discloses an embedment of the cable. In one embodiment shown in Figure 4, the optical fibers are spirally wound in grooves 24 around a strength member 28.

Electricite de France, however, fails to disclose all of the elements of claim 1. First, the reference fails to disclose that the three phase conductors are helically wound around the supporting rope including the optical fibers as recited in claim 1. When helical orientation is intended to be disclosed, the reference is explicit. For

example, the discussion of Figure 4 discloses that the optical fibers are spirally wound.

Second, Electricite de France fails to disclose at least a supporting rope including a tubular structure being resistant to transverse compression as recited in claim 1 of the present application. Figure 5 discloses a tube of thin rigid thermoplastic material 30 surrounding the optical fibre 34, however, there is neither an indication that the thin rigid thermoplastic material 30 is resistant to transverse compression, nor does the tubular structure contain the tubular element with the optical fibre as recited in claim 1. Nevertheless, thin rigid thermoplastic material 30 better corresponds to the recited tubular element.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 1, 4, 6, 10-11 and 14 under 35 U.S.C. § 102(b) as anticipated by Siemens and claims 1, 6, and 8 as anticipated by Electricite de France.

V. SECTION 103 REJECTION

The Examiner rejected claims 2-3, 5, 7, 9, 12-13, and 15-29 under 35 U.S.C. § 103(a) as obvious in view of Siemens and Electricite de France in further view of GB 2 035 599 ("Lewis") for the reasons disclosed at page 4 of the Office Action. Applicants again object to this rejections as being improper for the failure to provide any reasoned analysis with regard to claims 5, 7, 9, 12-13, and 15-29, as required by M.P.E.P. §§ 707 and 707.07(d). Nevertheless, Applicants traverse this rejection for at least the following reasons.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER ^{LLP}

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

Applicants' invention is not obvious over Siemens, Electricite de France, and Lewis. As an initial matter, to establish a prima facie case of obviousness, the Examiner must show that three basic criteria have been met. See M.P.E.P. § 2143. Applicants submit that the Examiner has not and cannot show, at a minimum, that the prior art references teach or suggest all of the claim limitations. See M.P.E.P. § 2143.03.

With respect to claims 2-3, 5, 7, 9, 12-13, 15-20, and 29, Applicants submit that the references do not teach the claimed limitations of independent claim 1 for the reasons discussed above. With respect to claim 28, the references do not teach that the three conductors are helically wound about the supporting rope, for the reasons discussed above, Applicants incorporate by reference the arguments made above, herein in full. The Examiner has relied upon Lewis to teach a tubular structure of metal. Office Action at. 4. Accordingly, Applicants submit that the Examiner has not shown how Lewis corrects the deficiencies of Siemens and Electricite de France.

With respect to claims 21-27, the Examiner has failed to show how the references disclose an optical fibre element comprising, inter alia, a tubular structure made from an expanded polymeric material. Nothing in either reference suggest that any layer can withstand the transverse compression forces occurring during manufacturing and the installation of the cable.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims under 35 U.S.C. § 103(a).

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

VI. CONCLUSION


In view of the foregoing amendments and remarks, Applicants submit that claims 1, 21, 28, and 29 are in condition for allowance, as are claims 2-20 and 22-27, at least by virtue of their dependency from allowable claims 1 and 21. Applicants respectfully request the reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account no. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

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By: 
Michael W. Kim
Registration No. 51,880

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER ^{LLP}

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com